

NOTES ON BROMELIACEAE. VI

Lyman B. Smith

DOMINICAN REPUBLIC

*TILLANDSIA MOSCOSOI* L. B. Smith & Jiménez, sp. nov.

Ab omnibus speciebus *Tillandsiae* adhuc cognitae, foliis inconspicue lepidotis laminis angustissime triangularibus, inflorescentia parva dense ellipsoidea, spicis paucifloris quam bracteis primariis infimis brevioribus, bracteis florigeris tenuibus quam sepalis paulo brevioribus differt.

Stemless; leaves very many, to 20 cm. long, exceeding the inflorescence, covered with fine pale very closely appressed scales, sheaths ovate, 2-3 cm. long, brown, blades linear-triangular, acuminate, 5 mm. wide, more or less involute; scape erect, largely hidden by the leaves; scape-bracts imbricate, subfoliaceous; inflorescence bipinnate, densely ellipsoid, 4 cm. long, 2 cm. in diameter; primary bracts imbricate, pale-lepidote, pink, the lower ones caudate and exceeding the spikes, the upper apiculate; spikes elliptic, 1-3-flowered; rhachis very short; floral bracts densely imbricate, elliptic, acute, subchartaceous, glabrous, carinate, incurved; flowers subsessile; sepals oblong, acute, 18 mm. long, slightly exceeding the floral bracts, thin, the posterior ones about half connate. Pl. I, fig. 1: Inflorescence x 1; fig. 2: Spike x 1; fig. 3: Sepals x 1.

Type in the U. S. National Herbarium, No. 1,957,867, collected on *Eugenia jambos*, over very rocky ground, Salto de Constanza, Province of La Vega, Dominican Republic, altitude 1,215 meters, October 24, 1950, by José de Js. Jiménez (No. 2220). Isotype in Herb. Jiménez.

The authors take pleasure in dedicating this interesting new species to Dr. R. M. Moscoso, renowned authority on the flora of the Dominican Republic.

WEST INDIES, VENEZUELA

*VRIESIA DIDISTICHOIDES* (Mez) L. B. Smith, comb. nov.

*Tillandsia didistichoides* Mez in DC. Monogr. Phan. 9: 778.

1896.

TRINIDAD: Fendler 827 (BM, type; US phot. 3993).

VENEZUELA: ARAGUA: Rancho Grande, Maracay, July 1948, Beebe 175 (US, petals appendaged !).

In his letter of July 20, 1955, Dr. Wilbur G. Downs confirms the presence of petal-scales in this species on the basis of Trinidad material preserved in alcohol.

## COLOMBIA

*AECHMEA ROMEROI* L. B. Smith, sp. nov.

A *Ae. tessmannii* Harms et *Ae. dactylina* Baker, quibus affinis, bracteis florigeris amplissimis tenuibus valde nervatis differt, a priore rhachibus per anthesin omnino occultis, a posteriore bracteis primariis serratis, ramis omnibus simplicibus rhachi excavata distincta.

Epiphytic, stemless; leaves many in a broadly funnelform rosette, to 55 cm. long, exceeding the inflorescence, diffusely punctulate-lepidote, sheaths broadly elliptic, 15 cm. long, pale green, blades ligulate, rounded and apiculate, 5-6 cm. wide, uniformly green except for a paler median channel toward base, laxly serrulate with flat spreading or ascending spines 2 mm. long; scape curved, 5 mm. in diameter; scape-bracts thin, quickly deciduous; inflorescence sublaxly bipinnate from about 8 spikes, glabrous at least in age; primary bracts broadly lanceolate, acuminate, 7 cm. long, decreasing evenly in size, membranaceous, red, laxly serrate; branches simple, divergent to spreading, peduncles 4 cm. long, strongly flattened; spikes lance-oblong, 10 cm. long, 25 mm. wide, strongly complanate; rhachis slender, excavated; floral bracts densely imbricate and completely covering the rhachis, very broadly ovate, acute, 22 mm. long, equaling or exceeding the sepals, carinate, chartaceous, prominently nerved, stramineous; sepals free, lance-oblong, slightly asymmetric, over 15 mm. long (tip decayed), thin, nerved; ovary ellipsoid, stout, 6 mm. long, epigynous tube short but distinct, placentae apical; ovules caudate. Fl. I, fig. 4: Apex of leaf x 1/2; fig. 5: Primary bract and spike x 1/2; fig. 6: Ovary and sepals x 1.

Type in the U. S. National Herbarium, No. 2,173,539, right bank of the Río Caquetá, between La Tagua and Puerto Boy, Territory of Caquetá, Colombia, May 9, 1953, by R. Romero Castañeda (No. 4220). Duplicate in the Herbario Nacional Colombiano.

*GUZMANIA CYLINDRICA* L. B. Smith, sp. nov.

A *G. mucronata* (Griseb.) Mez, cui affinis, bracteis florigeris valde nervatis, apice excepto vix verruculosus, fere omnibus rotundatis differt.

Epiphytic, over 8 dm. high; leaves known only from a single fragmentary example, rosulate as indicated by the ample sheaths, large, obscurely and diffusely appressed-lepidote, sheaths broadly elliptic, 25 cm. long, blades acute as indicated by the scape-bracts; scape straight, very stout; scape-bracts erect and densely imbricate, the upper ones lanceolate, acuminate with involute apices, green; inflorescence simple, densely cylindrical, 22 cm. long, 4 cm. in diameter, fertile throughout; floral bracts in 6 rows, elliptic, 4.5 cm. long, the lowest acute, the others broadly rounded with an umbonate apex, coriaceous, prominently nerved, obscurely lepidote toward apex; pedicels broadly obconic, 5 mm. long; sepals lanceolate,

obtuse, 35 mm. long, connate for 8 mm., coriaceous, nerved, obscurely and diffusely brown-lepidote; petal-blades elliptic, obtuse, 25 mm. long, cream drying to yellow; stamens included. Pl. I, fig. 7: Inflorescence  $\times 1/4$ ; fig. 8: Floral bract  $\times 1$ ; fig. 9: Sepal  $\times 1$ .

Type in the Herbario Nacional Colombiano, No. 47,956, collected on the Serranía de Macuira, Territory of Guajira, Colombia, altitude 100-600 meters, December 3, 1953, by R. Romero Castañeda (No. 4465).

**RONNEBERGIA KILLIPIANA** L. B. Smith, sp. nov.

A R. maidifolia Mez, cui affinis, foliorum laminis petiolisque bene serrulatis, laminis multo angustioribus, sepalis muticis differt.

Epiphytic, stoloniferous; leaves few, fasciculate, much exceeding the inflorescence, pale-lepidote beneath, sheaths narrowly triangular, 8-12 cm. long, entire, petioles to 20 cm. long, laxly serrulate with ascending flat spines less than 1 mm. long, blades linear-lanceolate, caudate-acuminate, narrowly cuneate, 30-35 cm. long, 28 mm. wide, laxly serrulate; scape curved, 2 mm. in diameter, pale-flocculose; scape-bracts imbricate, lanceolate, acuminate, membranaceous; inflorescence simple, subtax, 3-4 cm. long, minutely pale-furfuraceous; floral bracts ovate, acute or acuminate, all or all but the lowest shorter than the ovary, thin, nerved; flowers spreading; sepals very asymmetric with a large spreading wing, muticous, 7 mm. long, about half connate; petals naked, imperfectly known; ovary globose, 4-5 mm. in diameter, epigynous tube large, funnelform; placentae apical; ovules short-caudate. Pl. I, fig. 10: Plant  $\times 1/10$ ; fig. 11: Inflorescence  $\times 1$ ; fig. 12: Sepal  $\times 2$ .

Type in the U. S. National Herbarium, No. 1,772,193, collected at Istmina, on Río San Juan, Intendencia El Chocó, Colombia, altitude 75 meters, April 29, 1939, by E. P. Killip (No. 35,481).

COLOMBIA: NARIÑO: Near Barbacoas by the Corregimiento Santander (Buenavista), drainage of Río Telembí, alt. 200-840 m., Aug. 3-5, 1948, García-Barriga 13167 (COL, US).

**TILLANDSIA DICHOPHYLLA** L. B. Smith, sp. nov.

A T. brunonis André, cui valde affinis, foliorum laminis anguste triangularibus subtus dense cinereo-lepidotis differt.

Epiphytic, stemless, 55 cm. long; leaves about 20 in a funnelform rosette, the outer greatly reduced, the inner to 36 cm. long, sheaths elliptic, to 20 cm. long, pale yellow-green except for the purple-tinged apex, obscurely punctulate-lepidote, blades narrowly triangular, acuminate, 3 cm. wide, flat, green and glabrous above, covered beneath with appressed cinerous brown-centered scales; scape curved, about 5 mm. in diameter; scape-bracts imbricate, the lower foliaceous, the upper broadly elliptic with short triangular lepidote blades, red, glabrous; inflorescence bipinnate, densely cylindrical,

18 cm. long, glabrous except for the apices of the primary bracts, red except for the petals (color unknown); primary bracts suberect, like the upper scape-bracts, almost exactly equaling the lower spikes; spikes nearly erect, sessile, elliptic, 4 cm. long, complanate; floral bracts densely imbricate, elliptic, acute, 25 mm. long, exceeding the sepals, carinate, nearly straight toward apex, coriaceous, even; flowers sessile; sepals lanceolate, acute, to 23 mm. long, high-connate posteriorly; petal-blades elliptic, 6 mm. long; stamens included. Plate II, fig. 1: Leaf  $\times 1/5$ ; fig. 2: Inflorescence  $\times 1/5$ ; fig. 3: Posterior sepals  $\times 1$ .

Type in the U. S. National Herbarium, No. 1,951,878, collected near Medellín, Department of Antioquia, Colombia, altitude 1,560 meters, November 11, 1946, by G. Gutiérrez V. and A. L. Delisle (No. 250).

**TILLANDSIA DUBIA** L. B. Smith, sp. nov.

Ab omnibus speciebus Tillandsiae et Vriesiae laminis foliorum linearibus acuminatisque, inflorescentia simplicissima dense disticha, rhachi alata, bracteis florigeris anguste lanceolatis carinatis membranaceis, sepalis liberis angustis acutis differt.

Epiphytic, 34 cm. high; leaves 25 cm. long, obscurely and diffusely punctulate-lepidote, sheaths ovate, inconspicuous, stramineous, blades linear, acuminate, flat, 15 mm. wide, green above, pale reddish purple beneath; scape erect, very slender; scape-bracts imbricate, tightly enfolding the scape, lanceolate, acuminate, membranaceous, purplish, glabrous; inflorescence simple, distichous-flowered, 13 cm. long, estimated about 2 cm. wide at anthesis, strongly complanate, glabrous; rhachis slender, alate with the wings prolonged onto the bases of the floral bracts; floral bracts erect at anthesis, narrowly lanceolate, acute, 3 cm. long, about 5 times as long as the internodes, slightly exceeded by the sepals, carinate toward apex, membranaceous, nerved, red-purple with stramineous apices; flowers sessile; sepals free, linear-lanceolate, acute, 27 mm. long, thin, nerved; capsules cylindrical, shorter than the sepals. Pl. II, fig. 4: Apex of leaf  $\times 1$ ; fig. 5: Section of inflorescence  $\times 1$ .

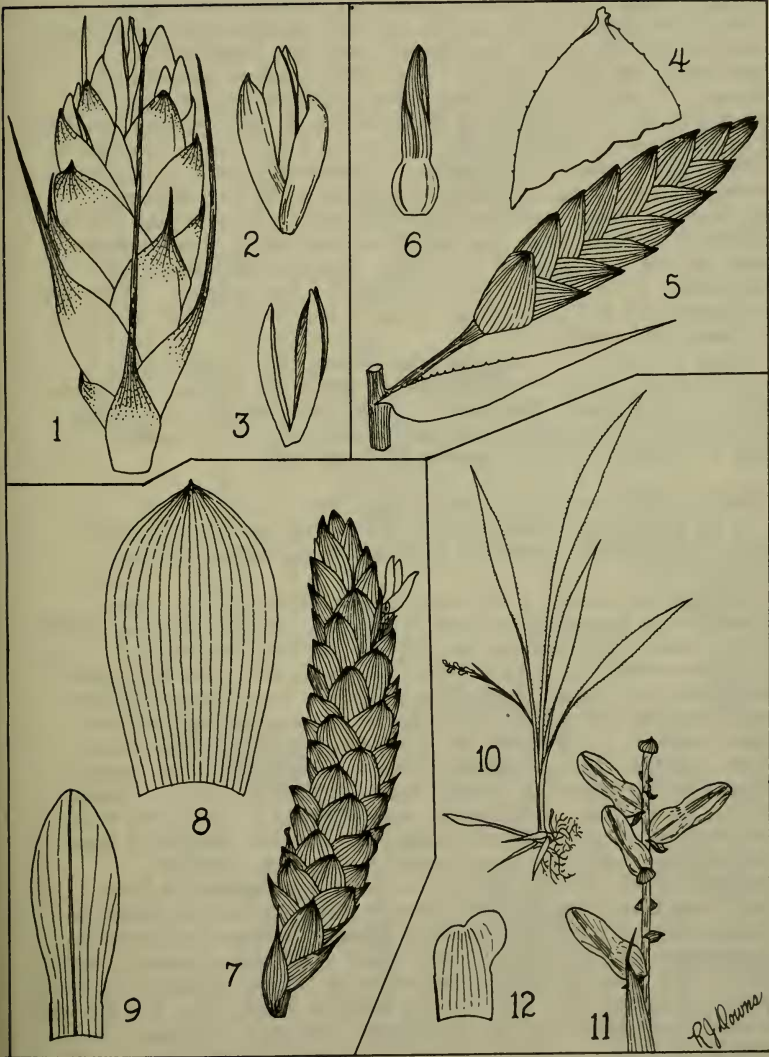
Type in the Herbario Nacional Colombiano, No. 48037, collected along trail north of Puerto Leguízamo, Territory of Putumayo, Colombia, altitude 200 meters, November 22, 1948, by R. Jaramillo-Mejía (No. 571).

Until flowers of this species are available it is uncertain whether it belongs to Tillandsia or Vriesia, so both genera have been examined thoroughly before describing it.

**TILLANDSIA FASSETTII** L. B. Smith, sp. nov.

T. carrierei André in systema Mezii proxima sed foliorum laminis subtus lepidibus sat magnis omnino vestitis, inflorescentia late ovoida, bracteis florigeris dense imbricatis minoribusque differt.

Plate I



Stemless, 35 cm. long; leaves about 20 in a broadly funnel-form rosette, 20 cm. long, sheaths elliptic, 7 cm. long, pale, diffusely brown-punctulate, blades ligulate, broadly rounded and apiculate, 25-30 mm. wide, flat, soon glabrous above, covered beneath with rather coarse appressed cinereous brown-centered scales; scape curved, 2.5 mm. in diameter, glabrous; scape-bracts elliptic, apiculate, red, the lower barely imbricate, the upper densely so; inflorescence densely bipinnate, broadly ovoid, 7 cm. long; primary bracts like the scape-bracts, about half as long as the spikes; spikes spreading, subsessile, lanceolate, acute, to 4 cm. long, complanate, 8-flowered; floral bracts densely imbricate, broadly elliptic, acute, 15 mm. long, carinate, slightly if at all incurved, coriaceous, even, glabrous; flowers subsessile; sepals oblong-elliptic, 12 mm. long, the posterior carinate, high-connate; petal-blades elliptic, 6 mm. long; capsules slenderly sub-prismatic, 2 cm. long. Pl. II, fig. 6: Leaf-blades, scape and inflorescence x 1/2; fig. 7: Primary bract and spike x 1; fig. 8: Posterior sepals x 1.

Type in the U. S. National Herbarium, No. 1,995,483, collected on small trees, crest of Cerro del Páramo, Cerro de Armas, region about Landazuri, 70 kilometers north of Velez, Department of Santander, Colombia, altitude 1,860 meters, July 2, 1944, by N. C. Fassett (No. 25,434).

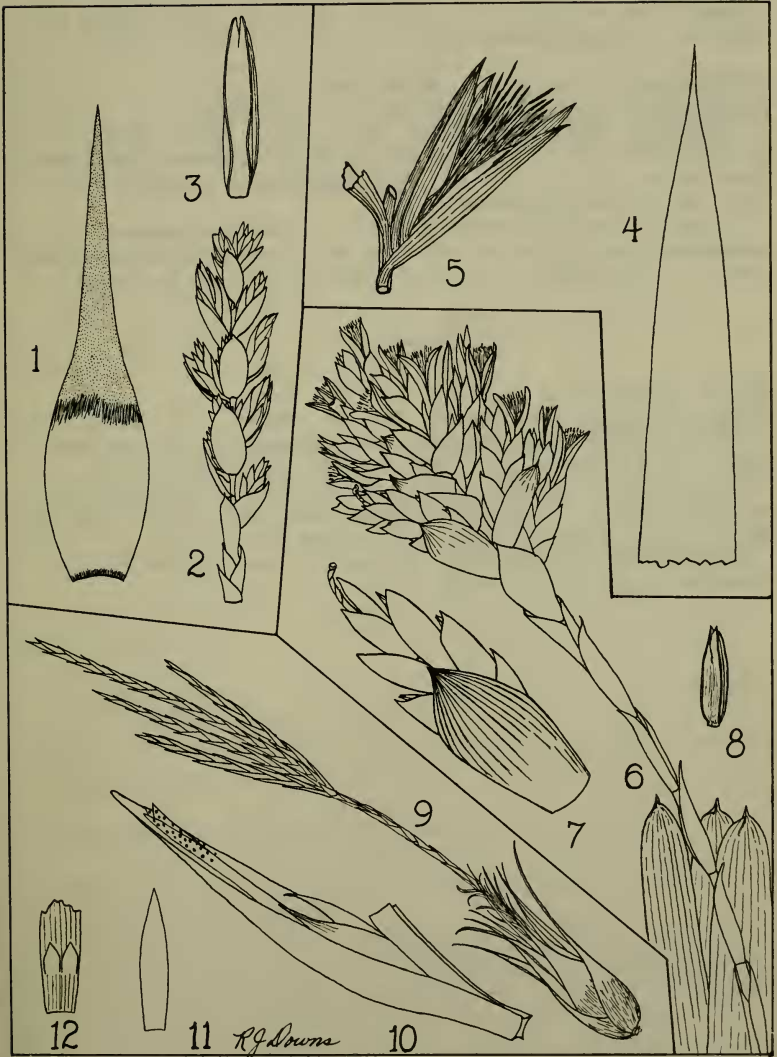
*VRIESIA CHLORANTHA* L. B. Smith, sp. nov.

A *V. pereziana* (André) L. B. Smith, cui affinis, spicis multo longioribus, bracteis florigeris majoribus glabris differt.

Epiphytic, nearly 1 m. long; leaves many, 27 cm. long, covered with appressed cinereous scales, sheaths broadly ovate, 10 cm. long, dark castaneous, blades narrowly triangular, filiform-acuminate, 25 mm. wide; scape slightly curved, much exceeding the leaves, 5 mm. in diameter; scape-bracts imbricate, tightly enfolding the scape, elliptic, acute and the lower caudate, membranaceous, cinereous-lepidote; inflorescence digitate from 4 spikes; primary bracts like the upper scape-bracts, not much larger than the floral bracts; spikes linear, acuminate, complanate, many-flowered, 20-25 mm. wide, the terminal 42 cm. long with several sterile bracts at base, the lateral 24-28 cm. long; rhachis flexuous, slender, strongly alate; floral bracts narrowly lanceolate, 4-5 cm. long, ecarinate, nearly even except for a prominent midnerve, membranaceous, purple, glabrous; flowers subsessile; sepals lanceolate, acute, 18 mm. long, free, ecarinate; petals linear, 4 cm. long, about equaling the stamens, green, bearing 2 linear scales at base. Pl. II, fig. 9: Plant x 1/10; fig. 10: Section of inflorescence x 1; fig. 11: Sepal x 1; fig. 12: Base of petal x 2.

Type in the Herbario Nacional Colombiano, No. 48,022, collected at Sesquilé, Department of Cundinamarca, Colombia, December 9, 1950, by M. Schneider (No. 1,015).

Plate II



*VRIESIA CRENULIPETALA* (Mez) L. B. Smith, comb. nov.

*Tillandsia crenulipetala* Mez, Repert. Sp. Nov. Fedde 16: 76. 1919.

COLOMBIA: MAGDALENA: Santa Marta, 1898-1901, H. H. Smith 2349 (GH, US, isotypes). Los Cumbres, above Minca, Sierra Nevada de Santa Marta, alt. 2000 m., Feb. 26, 1949, Hawkes 588 (COL, US, petals appendaged !).

*VRIESIA ELATA* (Baker) L. B. Smith, comb. nov.

*Tillandsia elata* Baker, Journ. Bot. 26: 46. 1888.

COLOMBIA: MAGDALENA: Valle Dupar, Santa Marta, Purdie (K, type, US phot. 4149). Mountains above Hacienda Cincinnati, Santa Marta, Aug. 3, 1946, M. B. & R. Foster & E. Smith 1396 (COL, GH, petals appendaged !).

So far it has not been possible to verify the petal-appendages from herbarium material, the above combination being based on observations on living plants by Mulford B. Foster.

#### PERU

*VRIESIA PATULA* (Mez) L. B. Smith, comb. nov.

*Tillandsia patula* Mez, Repert. Nov. Sp. Fedde 3: 35. 1906.

PERU: JUNIN: Prov. Tarma, above Huacapistana on the Palca road, alt. 1,900-2,000 m., Jan. 7, 1903, Weberbauer 2012 (B, type, F phot. 11520). Prov. Tarma: Between Carpapata and Huacapistana, on the Tarma-San Ramón road, alt. 2,000-2,100 m., May 23, 1955, Ferreya 11051 (US, petals appendaged !).

The Ferreya specimen has two small lateral spikes but is otherwise very similar to the type.